Claims

1. A composite video signal separation device, comprising

a delay memory for storing a composite signal, and configured to output multiple delayed versions of said composite signal;

multiple demodulators, coupled to said delay memory, and configured to demodulate said multiple delayed versions of said composite signal by a sub-carrier, generating multiple complex baseband signals;

a vertical signal processing block, coupled to said multiple demodulators, and configured to process said multiple complex baseband signals, and configured to output a first separated signal;

a modulator, coupled to said vertical signal processing block, and configured to modulate said first separated signal, generating a remodulated signal;

a subtraction means, coupled to said modulator and configured to subtract said remodulated signal from one of said multiple delayed versions of said composite signal, generating a second separated signal.

2. A composite video signal separation device, comprising

a delay memory for storing a composite signal, and configured to output multiple delayed versions of said composite signal;

multiple demodulators, coupled to said delay memory, and configured to demodulate said multiple delayed versions of said composite signal by a sub-carrier, generating multiple complex baseband signals;

a vertical signal processing block, coupled to said multiple demodulators, and configured to process said multiple complex baseband signals, and configured to output a first separated signal and a second separated signal;

a modulator, coupled to said vertical signal processing block, and configured to modulate said first separated signal, generating a remodulated signal;

a subtraction means, coupled to said modulator and configured to subtract said remodulated signal from one of said multiple delayed versions of said composite signal, generating a third separated signal.

3. A composite video signal separation device, comprising

a delay memory for storing a composite signal, and configured to output multiple delayed versions of said composite signal;

multiple demodulators, coupled to said delay memory, and configured to demodulate said multiple delayed versions of said composite signal by a sub-carrier, generating multiple demodulated signals;

multiple horizontal signal processing blocks, coupled to said multiple demodulators, and configured to process said multiple demodulated signals, generating multiple complex baseband signals;

a vertical signal processing block, coupled to said multiple horizontal signal processing blocks, and configured to process said multiple complex baseband signals, and configured to output a first separated signal;

a modulator, coupled to said vertical signal processing block, and configured to modulate said first separated signal, generating a remodulated signal;

a subtraction means, coupled to said modulator and configured to subtract said remodulated signal from one of said multiple delayed versions of said composite signal, generating a second separated signal.

4. A method for composite video signal separation, comprising the following steps:

obtaining samples of a composite signal;

storing said samples in a delay memory;

demodulating multiple samples from said delay memory by a subcarrier to form multiple complex baseband signals;

vertically processing said multiple complex baseband signals to form a first separated signal;

modulating said first separated signal by a subcarrier to form a remodulated signal; and

subtracting said remodulated signal from one of said samples of said composite signal to from a second separated signal.

5. A method for composite video signal separation, comprising the following steps:

obtaining samples of a composite signal;

storing said samples in a delay memory;

demodulating multiple samples from said delay memory by a subcarrier to form multiple complex baseband signals;

vertically processing said multiple complex baseband signals to form a first separated signal and a second separated signal;

modulating said first separated signal by a subcarrier to form a remodulated signal; and

subtracting said remodulated signal from one of said samples of said composite signal to from a third separated signal.

6. A method for composite video signal separation, comprising the following steps:

obtaining samples of a composite signal;

storing said samples in a delay memory;

demodulating multiple samples from said delay memory by a subcarrier to form multiple demodulated signals;

horizontally processing said multiple demodulated signals to form multiple complex baseband signals;

vertically processing said multiple complex baseband signals to form a first separated signal;

modulating said first separated signal by a subcarrier to form a remodulated signal; and

subtracting said remodulated signal from one of said samples of said composite signal to from a second separated signal.